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THE NORTH DAKOTA FARMER



"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARMERS"

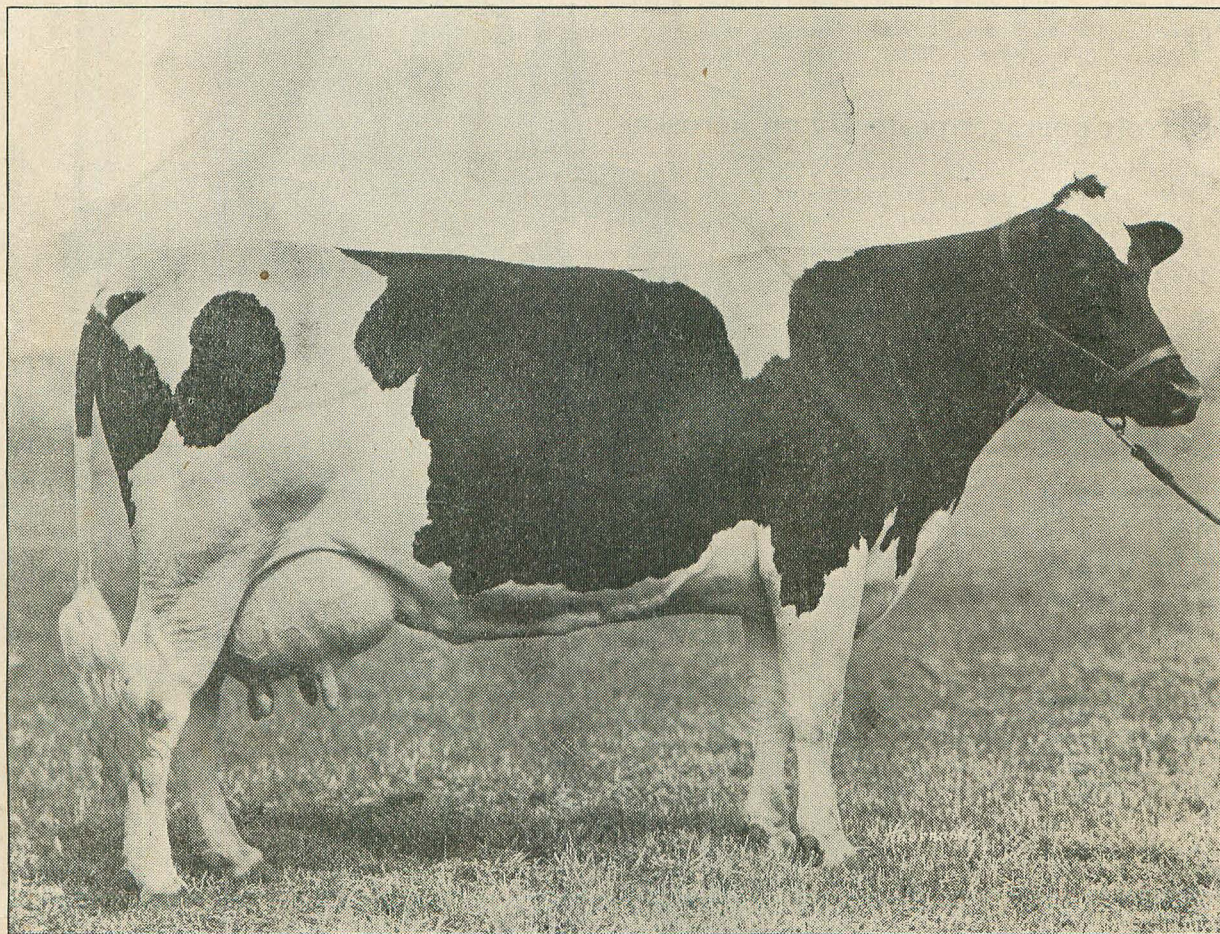
Alex Alin

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Vol. 17, No. 1

Lisbon, North Dakota, July 15, 1915

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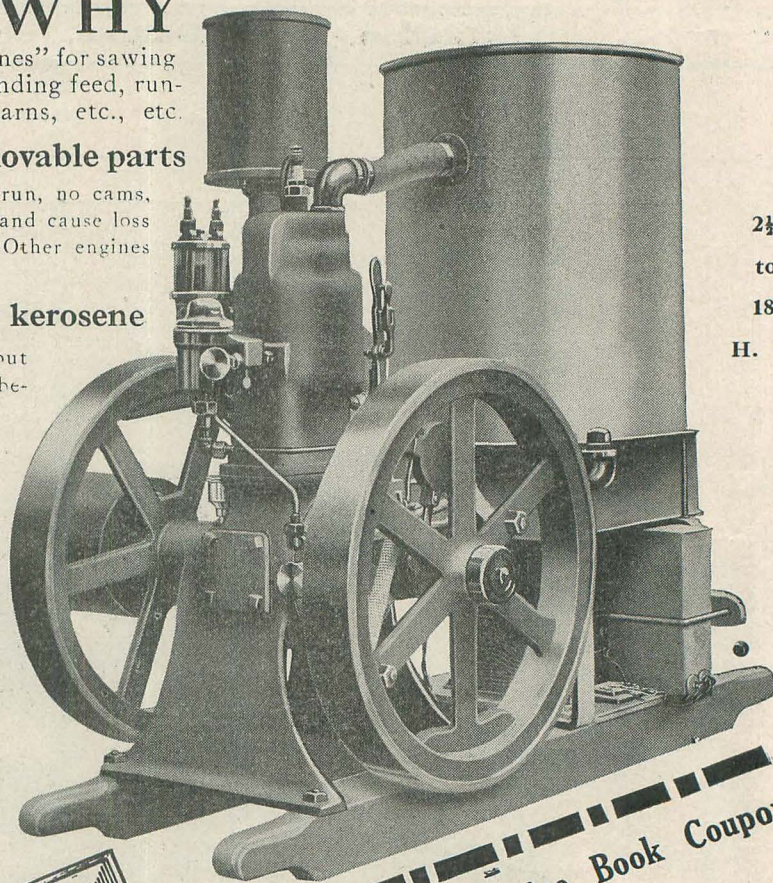
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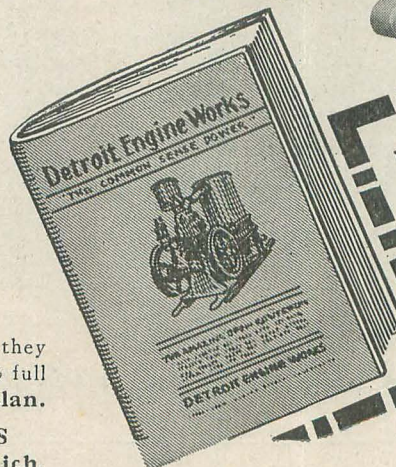


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THE NORTH DAKOTA FARMER

Vol. 17, No. 1

LISBON N. D., JULY 15, 1915

50 Cents a Year

The Stewardship of the Soil

Baccalaureate Address By John H. Worst, Pres. N. D. A. C.

(Continued from last issue)

Increased Production Not Sufficient. Hitherto the agencies for rural improvement, both state and federal, have directed their energies chiefly toward increased production. And this with but scant consideration for profits that should be realized by the producer as a result of the larger yields. Material prosperity, however, is not a sufficient motive, except where it assuredly is used to improve the moral and social conditions of the community life. To double the yield of crops without doubling the enjoyments of living and improving home comforts accordingly, will avail but little toward developing rural conditions that will withstand the competition and false allurements of the city.

Urban Degeneracy. A nation's strength, moreover, is a matter of blood and brain fiber. Urban degeneracy is an accepted biological fact. The dissipation, lack of physical exercise in the open air, and high pressure living and working leaves in its trail a progeny diminishing in numbers and decadent in those high qualities essential to good government.

Democracy, as a permanent institution, however, is not yet an assured fact. The experiment of self-government is still in the making. Its perpetuity cannot be predicated upon scheming traders, money brokers and political manipulators, but must depend in the last analysis upon the solid phlegm and conservatism of its rural districts where men are too busy with productive labor to scheme for political office or unearned wealth. In other words, and I speak it with sincerity, the rural population conserves the real dependable life blood of this nation. It is an accepted fact that in every crisis of our country's history the rural population was not only on the side of right, but ready to defend the nation's honor with their votes or with their blood.

When the nation's debt was appalling and money poured into the

national treasury in but feeble currents the tariffs that replenished it again were borne like a young Hercules by the farming class, tho they received but a minimum of its protection. Every influence, therefore, that tends to exalt agriculture as a profession, and farming as a desirable mode of life, whether it be intellectual, political, ethical or spiritual, is for the general welfare.

The time is not far distant, let us hope and pray, when agriculture will cast off the thralldom of the ages and assert her own. But not until the sons and daughters of the country, trained for rural social and industrial service, as you are being trained, assert an aggressive leadership, with genuine patriotism for the needs of the open country, will the domination of ulterior interests be removed and agriculture made free to manage its educational institutions and business affairs, in part at least, for its own good.

The Rural School Problem. Since education is the governing factor, especially so far as it directs the attitude of rural children toward rural conditions, the country school should be so redirected and revitalized as to "stir into action community forces which are now dormant; and to make the rural school a strong and efficient social center, working for the upbuilding of all the varied interests of a healthy rural life."

"The redirection of rural education means that the school is to abandon its city ideals and standards, except as these are adaptable to rural as well as to city schools, and to develop its instruction with reference to its environment and the local interests and needs. The main efforts of its instruction should be to put its pupils into sympathetic touch with the rural life about them, in which the great majority of them ought to find their future homes."—Cubberley.

The away-from-the-farm-influence of rural education which has in the past proved a serious handicap to rural progress and open country pursuits, would thus be materially counteracted.

Quoting Cubberley again:

"The uniform text-books which have been introduced by law, were books written primarily for the city child; the graded course of study was a city course of study; the ideals of the school become, in large part, city and professional in type; and the city-educated and city-trained teachers have talked of the city, over-emphasized the affairs of the city, and sighed to get back to the city to teach. The subjects of instruction have been formal and traditional, and the course of instruction has been designed more to prepare for entrance to a city or town high school than for life in the open country. So far as the school has been vocational in spirit, it has been the city vocations and professions for which it has tended to prepare its pupils, and not the vocations of the farm and the home."

Then says Roosevelt:

"Our school system is gravely defective in so far as it puts a premium upon mere literary training and tends, therefore, to train the boy away from the farm and workshop. Nothing is more needed than the best type of an industrial school, the school for mechanical industries in the cities and for teaching agriculture in the country. No growth of cities, no growth of wealth can make up for any loss in either the number or the character of the farming population. We of the United States should realize this above most other people. We began our existence as a nation of farmers, and in every crisis of the past a peculiar dependence has had to be placed upon the farming population, and this dependence has hitherto been justified."

The Rural Church Problem. No permanent rural civilization, however, can be maintained that will attach

the population to the soil with satisfaction and contentment without provision being made for enjoying religious services among people of their own kind and class. This necessitates a social and religious center for every rural community. The church can and should be made such social center. For economic and social reasons, however, denominationalism can well be dispensed with, as such, and just plain Christianity substituted for sectarianism. A social center thus maintained will stimulate neighborly intercourse and satisfy the demands of both young and old for religious culture, for recreation and pastime. Where schools are consolidated the school house and grounds will answer for all gatherings whether for worship, for the discussion of civic or neighborhood problems or for recreation and amusement. For without such neighborhood intercourse, life deteriorates into a dull routine, and the moral and religious tone of a community, degenerates. Moreover, under such conditions, young people become disgusted with its monotony and aimlessness, and seek city employment.

But before the country church can be made an efficient community force, pastors must be found or created that meet the conditions of country life. A most excellent city pastor might prove to be a regrettable misfit in a rural community. Moreover, the modern clergy seem quite as prone to herd in the towns and cities as the rest of mankind, which fact has a bad influence on the youth of the country.

Quoting from Rural Life and Education: "The rural minister needs economic and agricultural knowledge more than theological, that he may use the economic and agricultural experiences of his people as a basis for the building-up of their ethical life; he needs educational knowledge, that he may direct his efforts with the young along good pedagogical lines; and the church as an institution needs to study carefully the rural-life problem, and to plan a program of useful service along good educational and sociological lines. Unless this is done, the church will bear but little relationship to a living community; its influence on the young will be small; and its mission of moral and religious leadership will be forgotten by the people."

Other Agencies for Rural Improvement. In addition to providing country schools and employing rural school teachers as efficient as the best in the towns, and the country church reawakened and converted into an efficient institution for progress, the Grange, farmers' clubs, the Y. M. and Y. W. C. A., the rural library,

boys and girls' clubs, farmers' institutes, women's clubs, literary and debating societies and amateur theatricals, of which the Little Country Theatre is the best exponent, can with profit be incorporated into the life of every rural community that maintains a social center, and that takes genuine pride in making country life what the possibilities so readily warrant.

No one of these separate organizations, even tho fully developed and earnestly supported, will altogether satisfy the needs of a community. No one of them should be over-emphasized for its own sake alone, for each is but a part of the community need. All are needed. The friends of each, therefore, should work for all and all work for each, and becoming thus federated, they will prove to be a positive force and establish, beyond question, a community spirit satisfactory to old and young alike.

A sufficient number of these rural social institutions to meet the changed conditions of modern life is as essential as a progressive and highly contented agriculture; for without such institutions agriculture will decline until on a level with the peasantry of other and less favored countries. For just in proportion as agriculture advances or declines will the prosperity of the people rise or fall, and the integrity of our government be stable or questionable. This fact has been clearly demonstrated in the history of nations; hence, stewardship of the soil embraces not only conservation of its fertility, but the fostering of such social institutions and educational forces as may be necessary to support a rural civilization that will minister to all the physical, mental and spiritual wants of a highly intellectual and permanent population. Said James A. Garfield:

"The higher education of the village and city youth, together with a modicum of the country youth, with only the fifth to eighth grade for the best blood of the state may stand for the educator's ideals, but it is bad for the country as a whole. It tends to make aristocrats of the poorest and slaves of the best blood. Education is for all, not for a favored few."

The Morrill Act. The Morrill Act of 1862 was the first important step toward the emancipation of agriculture. The establishment of the Land Grant Colleges was the biggest piece of constructive legislation that Congress has enacted during the past century. By means of higher education thus redirected and vitalized, industrial independence will ultimately be realized. But the work moves slowly. However, in spite of ridicule and unmerited handicaps, and even the con-

tempt of too many of the farming class, these institutions have grown steadily influence and power.

The North Dakota Agricultural College directs its energies toward a system of education that at once affords all the means of culture and character building that collegiate courses of study can offer, yet without departing materially from giving special emphasis to those subjects which are directly related to the homes and the chief industry of the state.

The purpose is not only to increase production as a means of profit and to render helpful social service, but to make farm life and rural conditions so agreeable and satisfying that the choice of agricultural pursuits, on the part of educated young people, will prove as popular and inviting as that of any other industry or profession. This is not an impossibility. From an educational view-point no vocation exceeds agriculture in the material available for calling out the best there is in man, spiritually or intellectually. From a social viewpoint, the country represents the purest and most neighborly sympathies. And from an industrial viewpoint it is the state's support and should be the state's pride. North Dakota will expand in wealth and influence, therefore, in proportion as she throws wide open the door of agricultural opportunity for the young people of the state. This she can best accomplish by means of public education expressed in terms of rural life.

After twenty years of service as President of your Agricultural College, I find that my chief gratification comes from having associated daily with a loyal and dependable faculty and with so many clean, ambitious and sympathetic young men and women.

In you and the thousands of Agricultural College students scattered over this and adjoining states, many of them having already won enviable distinction by their public services, and all giving evidence of most exemplary citizenship, I not only take sincere pride but also find my chief reward. Others may scheme for wealth or fame, but for one at my time in life, I would not exchange the friendship of the Agricultural College student body, past and present, for earthly riches or personal honor.

I have implicit faith in the future of our Agricultural College as I have in this great agricultural state. Her broad acres are being rapidly occupied by a progressive and enterprising husbandry. Her cities and villages keep pace with her rural development. The dreams of the pioneers are fast becoming realities. The erstwhile home of the red man and the feeding ground of

the bison, are destined soon to be thickly dotted over with luxurious farmsteads, made beautiful by the arts of civilization and prosperous by the skill and industry of a happy and contented rural population.

Students of the Agricultural College, your mission lies in this direction. Your influence upon the future development of this state will be as certain as it will be beneficent. The door of opportunity stands ajar, inviting you to enter and share the blessings that reward the industrious and reap the honors that crown the lives of those whose stewardship has been faithfully kept. May no temptation ever swerve you from loyalty to the cause which your alma mater represents. Too often the enemies of industrial freedom capture with the blandishments of vanity, the trusted leaders of reform.

Let your hearts, therefore, ever beat true for the best there may be in store for those whose sweat fertilizes the business of the state. The cause of the people should ever be your cause, and having received your education largely at their expense, spare not a generous service in return for the academic honors that now await you.

FIGHTING THE WEEDS ON THE FARM

I. Annual and Biennial Weeds

In the control of weeds there are three main principles to be observed; preventing the weeds from going to seed on the farm, preventing the weed seeds from being brought to the farm, and in the cases of perennials, starving out the underground parts by preventing them from making top growth. These are outlined, together with a discussion on handling the three kinds of weed in a new Farmers' Bulletin No. 660, "Weeds: How to Control Them," of the U. S. Department of Agriculture. In dividing weeds into three classes; annuals, biennials and perennials, the bulletin shows that the annuals and biennials propagate themselves by seeds alone, and in dealing with them the two main principles involved are preventing weeds from going to seed on the farm and preventing weed seeds being brought to the farm.

An enormous number of seeds are produced by weeds, the number varying from 100 to several thousands per plant. Some weeds, such as wild carrot, burdock, and sow-thistle, are capable of producing 20,000 or more seeds to the plant.

If the weeds are attacked when the most advanced have just reached the

full-bloom stage they can be prevented from seeding. At this stage, too, the roots are at their weakest, especially those of the annuals and biennials which are largely exhausted.

Tillage in its relation to weeds usually is practiced for the benefit of the immediate crop, but it may also serve the purpose of preventing hosts of weeds from maturing seeds. Thorough tillage serves the additional purpose of encouraging the rapid germination of weed seedlings while young. Thus the thorough preparation of the seed bed of every crop is important in the control of weeds. Each harrowing destroys hosts of young weed seedlings as it is only the weed seeds within a few inches of the surface of the soil that germinate.

After planting the cultivated crop the same object, that of attacking the weeds when young, should be kept in mind. More weeds will be killed just before and after the crop comes up, by the use of a drag harrow or spike-harrow, than by several cultivations when the plants are larger. Cultivated crops offer abundant opportunity to rid a farm of weeds and if properly handled they are rightly termed "cleaning crops," but where these crops are not well cultivated, weeds are actually stimulated to vigorous growth and prolific seeding.

After the small-grain crop is harvested in the northern states it is often considered good practice to harrow or disk the stubble to encourage the germination of weed seeds that are at or near the soil surface. The seedlings are subsequently killed by the fall-plowing or by the cold weather. Some weeds, such as ragweed and fox-tail, start to mature soon after harvest, so that care must be taken to turn the plants under before the weeds approach maturity. Plowing without the preliminary disking would turn under millions of weed seeds to make trouble in future years.

Mowing is another way of preventing weeds from going to seed, continues the bulletin. As a rule it is best to mow when weeds have reached the full-bloom stage. When there are patches in grain fields thick with weeds it will be well to cut them, grain and all, before the weeds start to go to seed. Most farmers mow or cut their fence-row and roadside once or twice a year to prevent their seeding. It is generally conceded that it pays to cut a hay crop early in order to prevent weeds from going to seed as well as to secure a better quality of hay.

The individual farmer is almost helpless against the introduction of weeds on his farm when the seeds are blown by the wind, and the situation

requires community action. Most of our states have weed laws which were enacted to prevent certain weeds from going to seed but these laws are not rigidly enforced. But seeds are introduced into the farm in many other ways than by the wind. They are brought in as seed impurities. Seeds are also introduced in some stock feeds. A number of states require the ingredients of stock-feeds to be named on the bags and this is desired in all states. Some states issue feed-control bulletins stating the analyses of various feeds offered for sale including the proportion of weed seeds. If the farmer reads these bulletins and the labels on the bags he may be in a position to judge whether he is introducing weed seeds on his farm in stock-feeds.

Another means of introduction of weed seeds is thru stable manure. As this manure usually has to be removed from the town in a fresh state, the only way to compost it in order to make the weed seeds rot is after it reaches the farm. It has been found that weed seeds in manure piles rot quickly under ordinary conditions so that most of them have lost their vitality in two months. But whether it is practical for the farmer to compost his manure and possibly lose some of its fertilizing value depends largely upon his ability to handle the manure and his cropping system.

CONCRETE FOUNDATIONS FOR FARM ENGINES

To obtain the highest efficiency an engine should have a heavy and firm foundation. This will not only reduce wear and tear incident to excessive vibration, but will result in prolonged and better service. Rigidity and durability in the foundation are best obtained thru the use of concrete.

The concrete should be mixed in the proportion of 1 part Portland cement, 3 parts clean, well-graded sand, and 5 parts crushed stone or gravel. All parts should be determined by volume and the use of accurate measuring boxes should be rigidly observed. The sand should all pass a one-fourth-inch mesh sieve, and the crushed stone or gravel should pass readily thru a one and one-half-inch sieve. In no case should bank-run gravel be used as taken from the deposit. It should be passed over one-fourth-inch and one and one-half-inch screens. That which passes the one-fourth-inch screen is sand, and that which passes the one and one-half-inch screen and is retained on the one-fourth-inch screen is gravel. If the size of the engine warrants the use of a re-inforced concrete footing, a 1:2:4

mix should be used for the re-inforced portion of the concrete. Sufficient water should be used to form a plastic, wet consistence, but not enough to cause separation of the cement and aggregates when placed.

Footings

For footings over 6 or 8 square feet in plan, stone up to two and one-fourth inches may be used. The stone should be graded, as this will insure a strong, dense concrete.

Construction

After the exact location of the center line of the foundation has been carefully established, a pit two feet to four feet deep should be excavated, the length and width being the exact size of the footing. Deposit the mushy wet concrete to the depth determined on the plan. In order to thoroughly key the engine foundation to

justment of bolts as may be required. The anchor bolts should be embedded in the concrete at least 18 inches, and supplied with cast-iron washers at the lower ends.

After the templet has been accurately set over the forms and the bolts so arranged that the tops are at proper elevation, the concrete is carefully deposited and spaded in the forms. Turn the gas-pipes from time to time, thus preventing them from sticking to the concrete. The concrete along the forms should be carefully spaded to prevent the formation of air-bubbles or pockets.

Damp burlap should be placed over the form after the concrete is placed. This will insure normal setting of the material. After twenty-four hours remove the form. The engine may be set and the bolts adjusted after forty-eight hours. Before the engine is set

miles or more in width. The climate is dry and mild, the elevation above sea level about 3,000 feet, and the mountains around the lake are not surpassed in grandeur by any in the west. The rainfall is from 15 to 16 inches annually.

About the lake the government now has a considerable acreage of numerous fine building and town sites, admirably located, with good roads to and from Missoula, Ravalli, Dixon and Plains, Montana, growing towns on the Northern Pacific Railway which runs just a few miles south of the lake with a line to the lake in prospect. These building sites have been surveyed and platted into villas and are to be sold at public auction by the government beginning July 26, 1915. They occupy prominent and attractive locations on the lake shore and islands in the lake and vary in size from about two to five acres.

The lands will not be sold for less than \$10 an acre for cash and upon reasonable time. There is a good road entirely around the lake with several other cross roads. The lands are good for fruit and garden trucking or simply for suburban residences or outing uses. Here is a rare chance to procure a mountain protected home at a small cost in one of the most attractive parts of the west. Detailed information may be had from any government land office, or L. J. Bricker, Northern Pacific Ry., St. Paul, Minn.

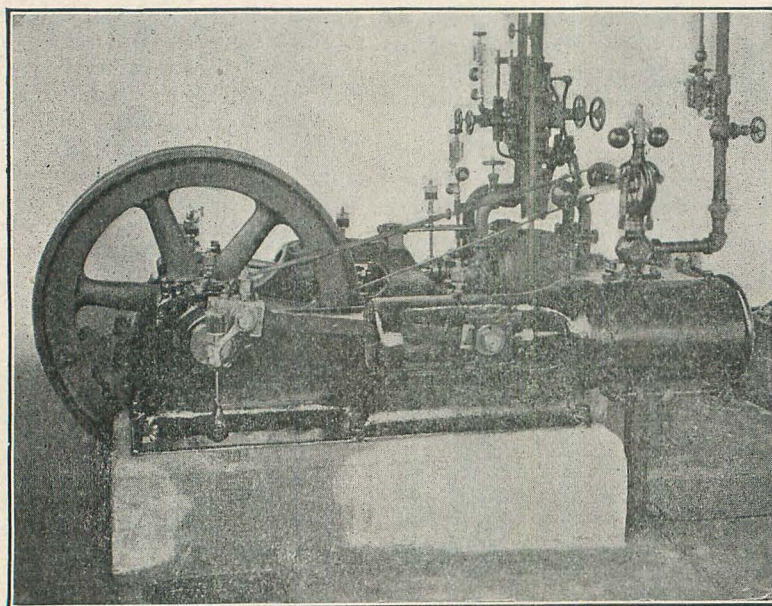
CORKING UP THIS YEAR'S WATER FOR NEXT YEAR'S WHEAT

An Interview With the Professor

"One hundred and ten barrels of water are needed to grow and mature every bushel of wheat," was the startling statement the experiment station man made to a few of us farmers who were visiting the professor early this summer.

"Gasping a few moments in silence over these tremendous figures, I finally found my voice to ask: 'Why, professor, that is a regular young creek. How are we to get and control all the water? You've spent our taxes getting all these startling figures, can't you tell us just how to get these thousands of barrels for our wheat?'"

"Yes, I can," said the professor. "This is the way I do on my own farm. You all know as I do that the largest yields often depend on the wheat plants getting a good start in the fall. This quick start depends largely upon the amount of reserve moisture in the seed bed. Like you men, I will follow my corn this fall with wheat. To insure the wheat a reserve store of



A Durable and Rigid Concrete Engine Foundation.

the footing, embed 3- or 4-inch stones in the portion of the footing under the engine so that they will protrude from the footing.

The Forms

A box form 8 inches larger in length and width than the engine base should be carefully set over the footing. The inside of the forms should be thoroly oiled to prevent the concrete from adhering to same. It is essential that the anchor bolts for the engine be carefully spaced and so placed as to take care of any small variations in position. Use a templet for this purpose, and supply for each bolt greased gas-pipes of twice the diameter of the bolts, the pipes to be removed before the engine is set. The purpose of the pipes is to provide for such slight ad-

remove the gas-pipes referred to above, and when the engine is finally placed, fill the space around the bolts with 1:1 mortar.

Do not use the engine until the base is at least two weeks old. If necessary to have an exhaust or drain pipe, this may be installed in the form before the concrete is deposited.

GOVERNMENT SALE OF BEAUTIFUL LAKE LOTS AT FLAT-HEAD LAKE, MONT., JULY 26, 1915

Flathead Lake, Montana is one of the most beautiful inland bodies of water in the United States. It comprises 360 square miles, being, in round numbers, 30 odd miles long by 10

moisture, I am now making special efforts to conserve it in the corn fields. My men (last week I did it myself) are cultivating the corn after each rain to prevent a crust forming on the soil. If the ground gets dry and hard after the corn is too tall to cultivate, the crust will be broken by dragging an old mower wheel thru the rows or a narrow sled turned upside down and weighted enough to break the crust may be used. I frequently use a one-horse cultivator when the corn gets too tall for the two-horse cultiva-

tor. Thoro cultivation at this time kills all weeds, insures a better crop of corn, leaves the ground in fine condition for seeding wheat besides conserving the all-important moisture for quick germination of the wheat.'

"That is simple," remarked five of my neighbors in unison. 'If it pays the professor, who is really a farmer, to cork up the moisture in his corn field for next year's wheat crop it will pay me and I am going to do it,' was in substance what each one said."

Get the Macaroni Habit

Made from Durum Wheat This Cheap and Unappreciated Food is as Nourishing as Beefsteak.

By Charles Cristadoro, in House-wife's League

(Editor's Note.—This article was written before the outbreak of the European war. Since then the acquisition of the macaroni habit on the part of the public and the production of genuine hard-wheat macaroni by manufacturers have become matters of vital importance. Now is the time to put the American macaroni industry on a solid and honest foundation. Consumers must get over the foolish idea that imported macaroni is better than domestic, and manufacturers must give us genuine macaroni made from durum wheat. Such macaroni is an excellent substitute for meat, and housewives should exercise all their ingenuity to devise ways of using it.)

A manufacturer of Italian pastes is called a "macaroni manufacturer." Macaroni, spaghetti, vermicelli, tagliarini, etc., all have, or if properly made should have, one common source, namely, durum-wheat semolina, and water, made into a marble-like dough. This is pressed into a multitude of shapes and air-dried to brittleness, each article having a different name, only because of its different form.

Macaroni is the largest size produced and the perforated stems may be a quarter of an inch, or fully half an inch, in diameter. The macaroni dough, placed in the powerful hydraulic press, comes out in the form of tubes. The dough passes around a very ingenious die which makes the hole, and the hole stays open; that's the interesting part.

Next comes spaghetti, identical as to material with macaroni, but of a smaller diameter and perforated with a much smaller die. Next vermicelli, as fine as thread almost, with no perforation. Then tagliarini, ribbons of flat dough, say a quarter of an inch

wide and a sixteenth of an inch thick. Forms innumerable almost are used, even to the "alphabets" for soup and beautifully formed diminutive sea shells, all "Italian pastes."

Yet there is macaroni and macaroni, good, bad, and indifferent, as regards both raw material and method of preparation.

The Real Thing

Genuine macaroni is made only from the golden semolina flour obtained from durum wheat, otherwise called "macaroni wheat." It is a dry-farmed wheat; for no irrigated wheat, or wheat grown under humid conditions, can equal the durum wheat grown with a minimum of water and a maximum of sunshine.

The element of durum wheat which commends it especially to the manufacturer of macaroni is the excess of gluten and sucrose it contains above the ordinary soft wheats. Because of this excess of binding gluten and sugar, macaroni made from durum semolina will stand boiling and retain its form and consistency perfectly. "Fake macaroni," made from soft, starchy flours, becomes disintegrated even to mushiness when cooked, split-

ting up and becoming a pulpy mass at times.

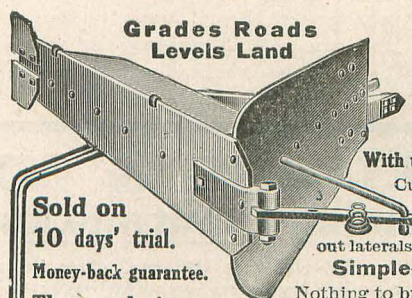
It is the use of soft flours by unscrupulous manufacturers in the United States that has kept our ports wide open to the durum-made Italian or French products, and incidently deterred many whose first experience was with the soft-flour article from using macaroni of any kind.

Fifteen years ago, more or less, the farmers in the dry lands of the Northwest who were burned out by drouth and hot winds, appealed to Secretary Wilson, of the Department of Agriculture, to find them a "crop of something," anything, that would grow. He sent Professor Carleton to the dry wheat lands of Russia and the latter brought home some thousands of bushels of dry-land durum wheats for seed.

And when in Russia Prof. Carleton found that these wheats, especially the Kubanka wheat, commanded always a premium on the Russian grain exchanges. It was not only a superb macaroni wheat, but it also made the most nourishing bread in the world. No bread so satisfying, so nourishing as durum-wheat bread. And macaroni is but an unleavened (unfermented), air-dried, raw bread. No yeast, no shortening, no salt even is used in its manufacture—just durum semolina flour and water.

Our Durum Wheat Crop

From the few thousands of pounds of seed imported by Secretary Wilson the Northwest has produced during the last fifteen years over 500,000,000 bushels of this invaluable wheat, exporting some of it to Italy, to be there made into macaroni and sent back to us, competing with our American macaroni because of Italian cheap labor. So when a pound of imported macaroni is used in the Northwest, it has, if made from Northwestern durum wheat, made a journey, from wheat field to the grocer's shelf, of approximately eight thousand or more miles. All this could be avoided if the American manufacturer would use only durum wheat and eschew the



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cheaper, soft and starchy flours, entirely unsuited for the manufacture of macaroni.

We are yearly producing now from thirty to fifty millions of bushels of durum wheat. That means a total weight of two to three billion pounds of wheat. We manufacture in this country but one hundred million pounds of macaroni. Of the balance of the wheat a small part goes abroad for macaroni manufacturers, but the great bulk is used by our millers who blend the durum flour with the softer flours.

It would be well for the American people, dietetically and economically, if they acquired the macaroni habit, for there is no food cheaper and better.

Foods are rated according to their energizing values. For instance, a pound of lean, round steak is rated as containing 950 units of energy. It costs 25 cents per pound and has 77 to 80 per cent, in round figures, of water. The actual dry food contents of a pound of round steak, therefore, costs \$1.25 and not 25 cents per pound. Meat is an expensive food.

Macaroni, or spaghetti, is rated at 1650 units of energy to the pound; it contains 3 to 6 per cent of waste moisture and costs, say 10, 15, or 20 cents per pound for the genuine article. There is a difference in favor of macaroni, as compared with meat, both as to cost and food value.

The Lean Meat of the Wheat

How many housewives understand this? And it is a fact that the gluten, the "lean meat of the wheat," in the durum semolina will make just as good blood, flesh, and bone in the human body as will the albumen and fibrin—the tissue—of the round steak, just as good. So the acquisition of the macaroni habit means something when it comes to securing the most food for the least money.

Lean meat, moreover, is an unbalanced food, a flesh-builder and an energizer, but not a heat-producer, in the sense that fats, starches and sugars are heat-producers. Macaroni is a flesh-builder and energizer and contains starch and sugar besides gluten. When we add cheese to macaroni we raise the ratio of flesh-

formers to heat-producers and thus secure a most admirably balanced food. The macaroni habit is worth looking into—and, incidentally, acquiring. It would prove valuable from both a dietetic and economic standpoint.

But there are better days coming for the manufacturers of genuine macaroni and for the public. North Dakota, thru its Food Commissioner, Dr. Ladd, has ruled against the soft-flour fake macaroni. Only genuine macaroni may henceforth be sold in North Dakota. The fake kind will no more pass muster; neither will the saffron "egg noodle," unless it contains two real eggs to each pound of noodles. The fake noodle that had nothing to commend it but its color and was as guiltless of an egg as the moon must come up to the new standard, or keep out of North Dakota.

Inasmuch as soft-flour macaroni has had much to do with favoring the importation of the genuine durum foreign-made product, the real manufacturers of honest macaroni, spaghetti, etc., owe North Dakota a debt of gratitude. It means the building up of the industry upon an honest foundation. Other States will follow and as the Department of Agriculture has standardized whole wheat or Graham flour as a straight, unbolted flour containing all the wheat berry including the bran—not half mill sweepings and half bran, as was frequently the case heretofore—why should it not also standardize macaroni and shut out forever the soft-flour kind?

Macaroni A L'Americaine

Now a few words more as to the macaroni habit and its acquisition. The American housewife, as a rule and in general practice, will boil a few ounces of macaroni or spaghetti, then put it in a baking dish with a little butter, milk, and cheese, and after baking, it is served at the table in portions that would fill a canary-bird's bathtub. One can imagine the Italian guest, accustomed to making a straight meal from a generous platter of macaroni or spaghetti, with sauce and grated cheese, inwardly smiling at the canary-bird serving and regarding us as barbarians, sadly in need of edu-

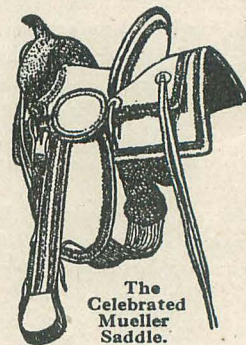
cation, not only as to the manufacture of macaroni, but as to the cooking of it and the eating of it.

The Italians use macaroni as a staff of life, which it is, or might be. To the American housewife it is a mere accessory to dishes which she regards as more substantial; and she uses it more for the sake of giving a little variety to her menu than for its nutritive value. As we have seen it is even better qualified than beefsteak for occupying the position of piece de resistance.

There is a time when perhaps the housewife visits a high-class Italian or French restaurant and eats macaroni or spaghetti with tomato sauce and a sprinkling of Parmesan cheese for the first time. It is a revelation to her. She consults her husband, and the head-waiter is asked, on the side and for a generous tip, to furnish the recipe for the sauce. He brings a slip, which in effect is about as lucid as the chef's verbal formula for his prize sauce: A leetle bit of zis and a leetle bit of zat, and a leetle bit of something else; and "zare is ze sauce."

Now here is a formula that, if followed, will turn a housewife into a ver-

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FARGO, NORTH DAKOTA

itable Cordon Bleu. Even a newly-wed could make this:

Brown a little onion well in the sauce-pan, with a suspicion of garlic (it's the abuse and not the use of a good thing that hurts its reputation) pass thru a sieve or collander, and add a ten-cent can of a reliable tomato soup and bring to a quick boil. The spaghetti is covered with this sauce, after draining; the Parmesan cheese is grated—not the kind sold in bottles, NEVER!—and served with the dish. All this done and well done, the first step towards the proper acquisition of the macaroni habit is taken. A good beginning.

With that ten-cent can of tomato soup the housewife has prepared a culinary miracle in the tomato-sauce line, turned herself into an Italian chef. Just a case of ten cents and ten minutes evolved into a ten-dollar sauce.

Things We Don't Know

It is not all in the sauce, however the kind of macaroni means something. We who eat some foreign-made macaroni sometimes consume macaroni that has been kneaded with the bare feet (fact!) and dried in dusty back yards or in dustier and dirtier public streets. Our home macaroni is machine-made, untouched by human hand almost from start to finish, and dried in clean air. All foreign macaroni is not foot-kneaded and street-dried, but some of it is; how much nobody exactly knows. If you buy the home article made by a reputable manufacturer, you know what you are getting.

There are a hundred ways of preparing and serving macaroni and spaghetti which can be gleaned from the most recent cook books, but for a beginning try the formula given above, which, because of its economy and simplicity, cannot be surpassed.

PROBLEMS TO MEET IN RAISING SHEEP IN NORTH DAKOTA

There are few lines of farm activities that do not necessitate some risk or offer some more or less difficult problems in order to make them financially successful. The growing of sheep is no exception to this rule. If we will search a little for reasons why more sheep have not been produced in the state in the past we will find several more or less plausible objections to the establishing of a flock on a North Dakota farm.

This state is just now passing thru the era in its agricultural development that may be designated as the period of single crop farming. This type of farming usually proves highly profitable on new farms, for a few years at least, with the result that the production of livestock of all kinds is looked upon very indifferently by the farmer

and this indifference seems to apply more to sheep than to any other class of farm animals. It will be admitted, however, that during the past five or six years many farmers in North Dakota have been desirous of getting in-

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The Government this year is asking farmers to put increased acreage into grain. Military service is not compulsory in Canada but there is a great demand for farm labor to replace the many young men who have volunteered for service. The climate is healthful and agreeable, railway facilities excellent, good schools and churches convenient. Write for literature and particulars as to reduced railway rates to Superintendent Immigration, Ottawa, Canada, or to

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to the livestock business. A large percentage of them have been able to make at least a small start. Others have found it out of the question to raise money enough to build the necessary fences, buildings and buy foundation stock, so that the lack of these essentials has discouraged some from attempting to make a start.

In certain districts the fear of the ravages of dogs, coyotes and wolves has discouraged some from trying sheep. Then again in some districts sheep at present are altogether unknown and the farmers of those districts hesitate to go into them for fear of not being able to market the lamb and wool crop profitably.

These matters are all problems that must be given careful consideration in the establishing and management of a flock but under present conditions all can be overcome and if one will but consider carefully the many sources of profit and advantage to be gained by keeping a flock of sheep the problems to be met will look easy in comparison to the advantages to be gained.

WHEN TO MAKE HAY

There is a best time for cutting the crop in order to secure the best result. Alfalfa for instance should be cut when it is coming into blossom, or better yet watch for the new shoots coming up from the crowns. These are the new crop coming on, and the alfalfa should be cut before these shoots are long enough to be cut off by the mower.

Clover should be cut when in full bloom, or when the first blossoms are beginning to turn brown. Cut timothy when blooming or soon after. Rye or wheat grass needs to be cut early, a little before blooming, as otherwise it becomes woody. Bromegrass can be cut at blooming. It is often left till the seed is ripe. Cut it high for the seed as the seed stems extend above the leafy part, and then cut the rest in the usual way for hay. This does not make as satisfactory hay as when cut earlier.

The point to remember in general in making hay is that at the time of blooming the nutrients are distributed thru the whole plant, and as soon as the blossoming is over these nutrients are transferred to the seed, and the plant becomes woody. So that while there is a gain in the nutrients in the seed, there is a loss in the amount in the other parts of the plant and the digestibility also decreases. Corn develops a little different. Both the nutrients and the digestibility in it increase up to the dough stage.

QUERY

North Dakota Farmer:

Being in need of some information I take this liberty of writing to you. The question is this:

Say, for instance, in our locality there was a man, who had some horses which another man thought had the glanders. Now this man wants to know, if he informs the State Veterinarian, who must pay the expenses for same. Will the man get pay from the state if his horses are killed?

Granting you can give me the information desired and direct me to same, I am

A SUBSCRIBER.

Your letter to the North Dakota Farmer under date of the 10th inst., has been referred to this department.

In reply to the same I beg to say that if you make a complaint to the State Veterinarian, Bismarck, N. D., and state that you have reasons to believe that there is an outbreak of glanders in your vicinity, that in my mind, there is no doubt but that this will be thoroughly investigated and that no charges will be made for this work, as the state pays all expenses. When state condemns horses for glanders, they pay for them at the rate of \$50 per head.

Yours very truly,
L. Van Es.

Among Our Advertisers

WHAT IS GALVANIZING

Galvanizing of wire and flat steel consists in the protection of either by a coating of zinc. This is done by passing the wire or flat steel, when properly cleaned, thru a bath of molten zinc or spelter. They are never passed thru the zinc bath more than once, because to pass them thru the second time would melt off the first coat of zinc put on. The terms

"double galvanized" and "triple galvanized" are, therefore, entirely misleading, because no double or triple galvanized wire or flat steel is made.

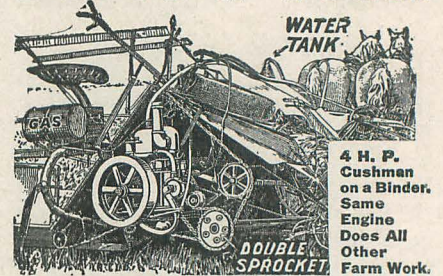
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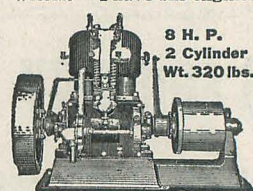


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laboratories of their plant at Joliet. They have learned that it is not alone the quantity of spelter that gives an assurance of length of life, but it is also the manner in which the spelter is applied that determines its value. A uniform coating of zinc applied so as to avoid bare and thin spots is far more desirable than a heavy uneven coating with portions of the surface poorly protected. The zinc must be applied at the proper temperature and under suitable conditions in order to secure the greatest possible bond or adhesion between the wire or flat steel and the zinc covering. The zinc coat must be as flexible so as to avoid cracking or peeling while wire is being manufactured into woven wire fences or coiled up in the roll for shipping.

The zinc galvanizing coat protects the surface from rust not only because it acts as a covering but more especially because there is an electrical relationship between the zinc and steel that causes the zinc to exercise a preserving influence. Zinc is practically the only suitable metal which is electro-positive to steel. When zinc and steel are put together, zinc becomes the electro-positive and steel the electro-negative body. The oxygen of the atmosphere, which is the destroying element, always tends to attack the electro-positive substance and to leave free from attack the electro-negative substance. The oxygen of the air has little or no effect upon zinc. In properly galvanized wire or flat steel, therefore, the oxygen is always harmlessly working upon or tending to destroy the zinc coating and is leaving almost free from attack substance.

The great steel companies at home and abroad have devoted many years to scientific investigation and research on this subject, and are now able to exactly determine the proper speed, temperature, etc., that should be used in galvanizing each different size of wire or flat steel in order to secure the very best results. The research work at Joliet, however, covering years of scientific and painstaking efforts, has gone farthest and accomplished most in improvement of methods and equipment to bring about most lasting and satisfying results in galvanizing.

FOR FORD OWNERS

The Model T. Ford Car, Its Construction, Operation and Repair. By Victor W. Page. Cloth Bound, 300 (5x7) Pages. Price \$1.00. Published by The Norman W. Henley Publishing Company, 132 Nassau Street, New York City.

This is the most complete and practical instruction book ever published on the Ford Car. It is a high grade cloth bound and well printed book illustrated by specially made drawings and, photographs. All parts of the Ford Model T. Car are described and illustrated in a comprehensive manner and nothing is left for the reader to guess at. The construction is fully treated and the operating principles made clear to everyone. Complete instructions for driving and repairing are given. Every detail is treated in a non-technical yet thoro manner.

A New Ford Engine Chart. By Victor W. Page. Just Published. Entitled Location of Ford Engine Troubles Made Easy. Size 25x38 Inches. Printed on Heavy Bond Paper. Price 25 Cents. Published by The Norman W. Henley Publishing Company, 132 Nassau Street, New York.

This shows clear sectional views depicting all portions of the Ford power plant and auxiliary groups. It outlines clearly all parts of the engine, fuel supply system, ignition group and cooling system that are apt to give trouble, detailing all derangements that are liable to make an engine lose power, start hard or work irregularly.

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Vol. 17 JULY, 1915 No. 1

The more moisture, the shallower
the cultivation.

Poultry on the farm will go a long
way toward swelling the bank ac-
count.

The present European war has
played havoc with the American
horse.

The profits arising from pedigree
cereals over scrub grains corresponds
with the difference between the profits
of pedigree as against scrub livestock.

"I wish I was a farmer
And on the farm did work—
I sure would be much happier
Than working as a clerk."

Farmers have only good words for
the farmers' institute and the number
of institutes held should be increased
until every community can be sup-
plied.

When the weather conditions are
unfavorable the good farmer lays it
over the indifferent farmer about two
to one when it comes to summing up
the season's profits.

When a common enemy threatens
the agricultural interests, whether
human, insect or fungous, farmers
should stand together and unitedly
combat the enemy.

Weeds, it is estimated, do damage
every year to the extent of \$400,000,-
000. And yet many farms are noted
more for the weeds they produce than
for the yield of bumper crops.

If the present warm weather con-
tinues a happy surprise awaits those
whose corn hitherto has been having
a struggle for life. Let no one give
up cultivating.

Every passing year should make
some addition to the household equip-
ment so that the wife and mother may
enjoy conveniences in the kitchen
equal to the conveniences the lord
and master enjoys on account of
modern labor-saving machinery on the
farm.

A boost for North Dakota is al-
ways in order. A boost for a poli-
tician, however, may not always be a
good thing nor a boost for some pri-
vate interest—for either or both are
too often veneered with but the skin
of commonwealth patriotism.

Crop conditions in North Dakota
and Montana are among the best in
the country. In these states the con-
ditions are from 6% to 8% above
the ten-year average. The estimate
given by the Department of Agricul-
ture is 116 million bushels of spring
wheat, with an average of 16 bushels,
as compared with 11 bushels last year.

If a man has anything in the way
of service that is worth while to give
to the world the people thereof will
make a path to his front door whether
he lives in village or country. The
big cities do not necessarily have a
monopoly of brains. The doctors
Mayo, in the village of Rochester,
Minnesota, is an example.

The "measure" worms played havoc
with many groves during June. For-
tunately these pests do not strip the
trees of their foliage every year and
generally they get in their work so
early that the trees will put out new
foliage before the summer is over.
Spraying with Paris green seems the
only reliable remedy for these leaf-eat-
ing pests.

Supplying the farm and the house-
hold with the most up-to-date in-
ventions as rapidly as prosperity will
justify it, in order to do more and
better work with less drudgery, should
become a habit with every farmer.
Every wife, especially, should be able
to look forward with assurance that
her tasks will be made easier with her
advancing age and the prosperity that
follows economy and thrift.

That silo must be filled. Give what
corn has survived the very best cul-
tivation. Mix the corn that does
mature with field and evergreen corn
planted for the stalks. With reason-

ably warm weather in August and
September corn planted in July will
even produce small ears. Broom corn
millet does fairly well to mix with
mature corn, tho it must not be too
ripe.

The possibilities for agricultural de-
velopment in North Dakota are be-
yond computation. With a fertile
soil, good climate (comparatively
good) and an ever-increasing demand
for her staple products, the world is at
her feet. It is easily possible to mul-
tiply her population by four without
abridging any man's ambition as a
farmer, and at the same time multi-
ply every farmer's profits by two
without materially increasing his phys-
ical labors. It's all a matter of know-
ing how and doing the proper thing
at the right time.

There is a great deal said about
solving country life problems, es-
pecially by bankers and others sel-
fishly interested in the farmers' suc-
cess. It would seem safer, however,
for the farmers of every community
to accept all the aid and sound ad-
vice that is offered, but at the same
time, keep a hand on the throttle. As
a matter of fact all business interests
depend upon the farmer and these in-
terests can offer nothing to the farmer
until after they have, somehow, got it
from the farmer. For this reason the
farmer should be independent and not
the recipient of alms. This "helping
the farmer," the real and only wealth
producer—is worth looking into. Why
should the farmer be helped? Why
not help himself?

WAYSIDE NOTES BY A RAMBLER

The August number will contain an
article by President Worst, who is now
on his vacation. Our readers may
rest assured that the observations he
makes will be exceedingly valuable, for
President Worst is one of the closest
observers and a most entertaining and
instructive writer.

STUDYING ELEMENTARY AGRICULTURE

Next month we shall begin a series
of articles on Elementary Agriculture
adapted to the rural schools of the
state. The state course of study will
be constantly kept in mind and many
of the articles in each issue will treat
of the subjects to be studied the suc-
ceeding month. No home in the
state, if there are children attending
the public schools, can afford to be
without the North Dakota Farmer.

Pure Food Advertisers

The products advertised below are in compliance with the pure food law of North Dakota and are of the highest grade. ASK YOUR GROCER FOR THEM.



"How Delicious!"

This is the verdict of all housewives as to

Hiawatha Canned Goods

This well-known brand represents the best that money can buy in Canned Fruits and Vegetables.

The Grocer who features Hiawatha Food Products builds both Profit and Prestige for his store.

We
Recommend
Hiawatha
Foods
FOR
TIRED
APPETITES



**STONE-ORDEAN-
WELLS COMPANY**
Eight Houses

**Our Candies
Are Pure**

Chaney-Everhart Co.
Fargo, N. Dak.

"BUY"

"EAT"

HOME BRAND

Pure Food Products

"ECONOMY" "SATISFACTION"

Griggs, Cooper & Co.

MANUFACTURING
WHOLESALE
GROCERS

ST. PAUL, MINN.

Main Offices:
CORNER THIRD AND BROADWAY

**DR. PRICE'S
JELLY
DESSERT**
NUTRITIOUS-WHOLESOME

One package, 10 cents, makes
pint of wholesome Fruit Jelly. All
flavors from true fruits.

MONARCH BRAND



FOOD PRODUCTS

A GUARANTY OF PURITY. A WELCOME GUEST at every table where the HOUSEWIFE demands the BEST. THE MONARCH LABEL insures QUALITY in Coffee, Catsup, Pickles, Maple Syrup, Canned Goods or any article bearing the MONARCH BRAND of REID MURDOCH & CO CHICAGO

Eat North Dakota Sweet Corn

Sanitary

PACKED BY
ONLY
FACTORY OF
ITS KIND IN
THE STATE.
SEALED IN
SANITARY
CANS AT
OUR
MODERN
THREE-
STORY
FACTORY



Delicious

NORTH
DAKOTA
CORN
EXCELS IN
SWEETNESS.

ASK YOUR
GROCER
FOR OUR
BRAND.

WRITE FOR
PARTICU-
LARS

Sheyenne Valley Canning Co.

Lisbon, N. D.

Livestock Department

FARM AND STOCK NOTES N. J. Shepherd

Mixing warm with cold milk hastens decomposition.

As a rule very quick growth is apt to be a weak growth.

With dairy cows especially discomfort always costs in extra feed.

Long and hard pulling makes broken-winded horses.

The older and heavier an animal the larger must be the ration of support.

Quality counts in market and with any kind of stock or produce of the farm.

As a rule early maturing animals, subject their owners to less risk of loss by disease.

The horse is a nervously organized animal and can be easily be ruined by ignoring that fact.

In the dairy good care and keep are as essential as proper selection and breeding.

Valuable as blood is in breeding it has a very valuable adjunct and that is individual merit.

The more succulent foods the more watery milk and oily cream which churns the easier.

From the time a colt is foaled each day should see some substantial gain made in its development.

With all animals vitality once broken is repaired at a loss and is liable to break again under a strain.

To a very considerable extent the young sow proves her future ability by the way she handles her first litter.

Milk containing uniformly, large fat globules the most readily parts with its cream. The largest globules always rise first.

Beware of salt that does not dissolve readily. It is liable to remain undissolved and make the butter gritty.

In case of trouble about churning, first look to the temperature. A higher or lower one may remove the trouble.

The temperature for churning ranges from 55 to 65 degrees, but from 60 to 62 are the most common temperatures.

You never hear those who are succeeding best and who are making money claim that painstaking work is not paying work.

Damp floors are an evil in any dairy as damp always tends very

much to the development and increase of organic germs.

It is not the man who cures his sheep so much as the one who prevents their becoming sick who makes the most out of them.

Always strain the milk as soon as possible after it is drawn from the cow so as to keep the amount of dissolved filth at the minimum.

Not only does it cost less to make a pound of young flesh than it does a pound of mature flesh, but the former is worth more in market.

The best foods to make blood are the best for milk production and the cow to make good milk needs good blood, which can best be made and cheapest by generous, comfortable, treatment.

If in feeding we lose a pound of flesh we lose more than the equivalent of that pound; we lose the food of support both while the animal was losing the pound of flesh and while it is putting on another pound to replace it.

The fleece is so sensitive to the physical condition of the sheep that it always will be found that to be out of condition for a few days only a brittle or rotten place will be found in that part of the fleece grown at that particular period.

A herd of good dairy cattle is never developed by crossing breeds. Some good animals may be obtained but in a majority of cases the result is a failure. Select the breed best suited to your conditions and line of dairying and then stay with it.

It is not necessary to let butter stand after salting by the granular method and give it a second working. It is better to put directly into the package. This plan saves both time and labor, and often saves the grain in the butter.

FACTORS IN THE PREVENTION OF TRANSMISSIBLE LIVESTOCK DISEASES

Dr. L. Van Es, N. D. Experiment Station

Changed conditions and circumstances are rapidly forcing the western farmers into a method of agriculture, in which the raising and exploiting of livestock forms an essential

CLASSIFIED ADS.

One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word. TRY IT HERE.

LIVE STOCK

DUROC JERSEY SPRING PIGS

Buy your new stock now while the price and express will be low. First class stock from prize winning sire at reasonable prices. Unrelated pairs and trios a specialty. New stock for old customers.

Roy W. Jacobs, : Wadena, Minn.

FOR SALE: Chester White Gilts Bred to Dakota's Pride, a son of Sweepstakes No. 28006, the hog that weighed 1260 pounds. Also Pigs at weaning time.

THE PRATT FARM
Geo. A. Pratt, Prop. : Cooperstown, N. D.

For Sale: Poland China Spring Pig Boars, S. C. White Leghorn Cockerels. Grimm Alfalfa Timothy and Clover Seeds. Catalog Free. J. W. BECKMAN, COKATO, MINN.

Duroc Jersey Pigs, delivered anywhere in the State of North Dakota or Minnesota, at \$20 apiece or \$35 per pair, pedigreed. FRANK LAMB, FARGO, N. D.

Red Polled. If you are looking for choice bulls all ages, write, Howard H. Capener, Erie, N. D.

Pure bred Percheron Horses and Shorthorn Cattle Stock for sale. Nels Knutson & Sons, R. 1, Fullerton, N. D.

THE PLEASANT GROVE FARM at Holmes, Grand Forks County, sells registered Shropshire and Oxford Rams and Ewes; also Polled Durham Bull Calves. R. E. Strutz, Bismarck, North Dakota.

FOR SALE. Two Holstein Bull Calves, nicely marked and fine animals; Ages three and four months. Sired by my herd Bull Sir Albino Beets Segis No. 116611. Wm. Pewe, McHenry, North Dakota, R. R. 1.

HIGH GRADE GUERNSEY CALVES
From our dairy herd, either sex, for sale. Prices ranging from \$10.00 up, according to age.

RIVERVIEW FARM
Stern Bros., Prop. Frank Lamb, Mgr.
R. R. 2, Fargo, : : North Dakota

Meadowlawn Farm. The largest breeders in North Dakota. Percheron Horses, Shorthorn Cattle, and Berkshire Hogs. Where quality counts. Address: A. H. WHITE, : : Kramer, N. D.

Choice Poland China Hogs always on hand Bred Gilts all sold, Register now for spring pigs, either sex; prices right. Thos. Forbes, Petersburg, N. D.

DUROC JERSEY March Pigs, high quality breeding. Buff Orpington Chickens, Cheap.
G. H. JOHNSON
Rt. 2 : : : Evansville, Minn.

For Large Yorkshires of either sex and bred gilts, address L. A. Knoke, Badger Den Stock Farm, Willow City, N. D.

ENVILLA STOCK FARM

Envilla Stock Farm, Cogswell, N. D. will quote you special prices on Angus and Holstein Cattle, Shetland Ponies, Duroc Jersey Hogs, Wolf Hounds, Collies, Rat, Bird Dogs and other breeds, Angora Cats. All varieties of chickens; turkeys, geese, ducks, guineas, pheasants, rabbits, ferrets. Pets. Live Foxes, Skunks, Mink and Badgers.

Bixby's Red Polls

of A. R. Breeding

My herd bull J. D. Merryweather No. 24396 is from 1400-pound cows and is getting the size in my herd. His dam is a full sister to the World's Champion Two-Year-Old heifer. His first three dams average close to 400 pounds butterfat in one year.

J. S. BIXBY, : : LISBON, N. DAK.

part and if this stock raising is to fit into the general system of agriculture, the farmer will have to use his brains so as to make his efforts profitable. He is compelled to select his breeding stock intelligently, he must feed so as to obtain the maximum result with a minimum of expenditure, he is forced to watch general economic and market conditions and apply them to this management, and last but not least, he must be forever alert with a view of excluding the losses from disease. The importance of the prevention of disease is not confined to the individual stock raiser, but it is vital to every other owner of livestock, because many diseases do not remain confined to just one herd, and it is this general importance, which perhaps justifies us to give some thought to preventable disease. The diseases which we wish to include in this series are especially the contagious and infectious ones, as they are the ones, which are responsible for the greater amount of loss.

The forces available for the systematic prevention and eradication of the transmissible animal diseases are three-fold.

In the first place, we have the man on the farm, the man who is directly interested in livestock. As little as he thinks it, he is the most important factor in the elimination of disease above all others.

He can do more towards its eradication than anybody, because he in many instances can refuse admittance of disease to his herds and flocks. He can do so by being careful, by learning just a few simple facts about disease and by learning them well. He need not worry himself about diagnosing the trouble, about recognizing specific lesions after death and such things: he can leave such problems to be decided by his veterinarian, but he should remember such simple facts as, that an infectious disease never does originate spontaneously, that the infection is carried among his herd in some way or other and he should know and understand these ways and he should also know where to look for them, while he should always be willing to take a few simple precautions before taking

chances. Take tuberculosis in cattle for example: Here is a disease which actually exists because cattle owners permit it to do so. How? Let us cite the instance of a man who wants to improve his stock or who wants to go into livestock. He will perhaps consult his farm paper and see if any sales are advertised. There usually are and he proceeds to stock up at one or more sales. He is careful about the animal's breeding, qualities, etc., but in nine out of ten cases, he never inquires into the possibility of this animal being tuberculosis. Yet, it is possibly difficult to buy ten such animals without getting one or more infected ones. In many instances such infected animals are turned into a herd without challenge and the result is that in due course of time something wrong is discovered, a test made which discloses infection in the greater part of the herd. A little precaution would have caused quite a saving in such a case.

DUROC JERSEYS Glts out of such Model Queen 6th, Model Beauty and other sows as well bred as could be bought at the sales last winter. Write H. N. HOYME, Jasper, Minn.

FOR SALE. Short Horn Bull, 18 months old, Roan; weight about 1000 pounds. Good breeding. J. M. Crawford, Wahpeton, N. D., R. 3.

HOLSTEIN Cows, Heifers and Young Bulls. All ages. Write Envilla Stock Farm, Cogswell, North Dakota.

Lyndale Stock Farm

Breeders of Registered Red Polled Cattle, and Big Type Poland China Hogs. Some good bull calves for sale. Also have 75 March and April 1st pigs now ready to ship. Mostly all sired by a "Peter Mouw" bred boar.

J. E. BASS & SONS, Props.

Wanted Men For U. S. Meat Inspectors; U. S. Quarantine Service; U. S. Field Service; as U. S. Army Veterinarians, etc. Graduates are eligible to examinations for such positions. Fine salaries. Great opportunities for Successful Practice. Our College under U. S. Government Supervision. Established 22 years. Thoroughly equipped. Faculty of 16 instructors. Write for particulars. **INDIANA VETERINARY COLLEGE** 837 E. Market St. Indianapolis, Indiana

ST. PAUL UNION STOCKYARDS CO., SOUTH ST. PAUL, MINN.

Comparison of Receipts and Shipments of Livestock for June, 1915

Receipts							
Railroads	Cattle	Calv-s	Hogs	Shee	Horses	Total	Cars
C. R. I. & P.	612	298	986	2 3	74	48	
C. G. W.	1158	09	0920	11 0	22	152	
C. M. & St. P.	4075	1405	26947	1107	156	600	
M. & S. L.	21 1	771	12959	343	3	286	
C., St. P., M. & O.	4827	1934	21350	1005	29	531	
C. B. & Q.	282	118	1370	373	24	34	
M., St. P. & S. S. M.	5684	283	25327	1127	154	608	
Gt. Nor.	8045	4385	45151	1745	201	97	
Nor. Pac.	4250	1286	24305	3791	852	521	
St. P. B. & T.	4	1	3			1	
Driven In.	849	162	2312	213	13		
Total	3 448	13869	166630	11174	1528	3757	
Inc. over 1914	8771	2017	14652	5196	1332	406	
Decrease							
Jan. 1 to date	205325	63139	1168728	1 9614	4760	24364	
Inc. over 1914	36936	497	396651		2277	5349	
Decrease				10400			
Average Wts.	799	214	240	83			
Shipments—							
C. R. I. & P.	893	104	159	121	87	36	
C. G. W.	1634	107	502	58	2	65	
C. M. & St. P.	5180	454	15842	268	120	343	
M. & St. L.	517		73			16	
C., St. P., M. & O.	35 5	891	17841		25	287	
C. B. & Q.	1056	21	12514	532	1319	219	
M., St. P. & S. S. M.	1585	96		3191	35	61	
Gt. Nor.	2264	290		183		71	
Nor. Pac.	2147	405		399	29	75	
St. P. B. & T.	25	6				2	
Driven Out	545	227	952	174	34		
Total Shipments	19371	2601	47883	4926	1651	1175	
Inc. over 1914	3282		6006		1418	204	
Decrease		494		3835			
Jan. 1 to date	12471	9240	397123	156313	4786	8389	
Inc. over 1914	15964		187773	14599	2258	1890	
Decrease		5020					
Consumed in So. St.							
Paul this month	12101	9741	119748	7595			

For Sale Choice Big China Gilts, Sired by Mouws Jumbo 3rd and Giant Rupert, bred to Dignan's Chief and Miller's Big Chief for March and April farrow. I am booking orders for spring pigs to be shipped at weaning time. Pedigree furnished. Call on or Write

J. A. Dignan

Waverly, : : : Minn.

A. A. McKECHNIE, Secretary-Treasurer.

In glanders it is often the owner's neglect or carelessness that is responsible for great losses. Many farmers, even if they know that glanders is prevalent in their vicinity will without hesitation tie their horses in any sort of a feed stable or water them from any public drinking troughs that come handy. They will trade or buy horses from the first outfit of gypsies that comes along and are

ready to swallow the tale of the new purchase having a snotty nose on account of a cold caught in the last rain and the swollen leg being due to "got hurt in the car," that threadbare lie so familiar in the mouth of horse-traders.

A little care and caution would certainly go a long way toward keeping glanders out of a stable.

There are many other diseases in which by timely discovery, isolation, disinfection, etc., the farmer himself is the most efficient factor in prevention.

The second forceful factor in the elimination of disease is the practicing veterinarian. Scattered over the rural and stock-raising sections of the state, he is always in reach of these needing expert advice. He should always be consulted in case of sickness of animals. In cases of any unexplained deaths, he should be engaged to make a careful investigation. In all such instances a properly trained veterinarian can give reliable advice. Such a man is a valuable asset to any rural community and stock raisers should encourage him by seeking his services. On the other hand, the veterinarian owes it to his community to keep himself well-informed on the subjects pertaining to his profession and on the advances made by science. He must always remain a student because then only will his value increase as he gathers experience.

His influence, however, is not limited to the giving of advice. Most of the methods of eradication of disease, require trained workers and supervision, whether they are undertaken by individual efforts or under the auspices of the state livestock sanitary authorities and for their proper and economic application the veterinary practitioner must be depended upon in many cases.

The third power is the commonwealth itself, because the prevention of disease is pre-eminently a duty of government and the influence of intelligent state action is extremely beneficial.

In order to accomplish good results, however, the state must have at its command an efficient organization operating under laws so constructed, that the necessary action can be taken under any circumstances which may arise. The authorities in charge of the work must be given power to make necessary regulations and to enforce them. They should not be hampered by lack of funds.

The best livestock sanitary police organized to fit into conditions as are found in this country is an appointed sanitary board operating thru the executive officer and a staff of assistants.

Under its direct function comes the supervision of the movement of livestock into the state, the establishment of quarantines in cases of outbreaks of disease and the proper disposal of animals affected with dangerous diseases and of carcasses dead with such disorders.

Such an organization should be provided with sufficient funds to enable it to make tests for tuberculosis and glanders without expense to the owners and to undertake the immunization of animals, wherever and whenever this could be done to advantage.

In North Dakota a good working organization has been obtained by the establishment of the Livestock Sanitary Board some years ago.

Since its inception, this Board has accomplished a great deal for the state. It has brought glanders under control and is well on the way to bring about its complete eradication. It has established a fairly efficient supervision over animals entering the state. It is managing the tuberculosis problem in an enlightened manner and probably by this time its fight against dourine is brought to a successful close.

It is not the intention of this article to sing the praises of this Board, but merely to point out that it is an important factor in preventing our heavy financial losses from disease. It is an institution which not only deserves the confidence of our livestock owners, but must have also their full co-operation. Such things as prompt reporting of suspicious cases, a thoro compliance with regulations, orders and suggestions, will have a far-reaching result in the prevention of disease.

It is the American idea to have a yellow-skinned and a yellow-legged carcass. This decision has hurt the popularity in this country of some of the finest table fowls—the Langshans, Houdans, Dorkings, etc., and boomed such breeds as the Plymouth Rocks, Wyandottes, Rhode Island Reds, Brahmas and Cochins.

To Exchange For North Dakota Farm

Eighty acres of beautiful waterfront on famous Puget Sound, State of Washington. A mile of finest shore front. Midway between Tacoma and Olympia. View of all the Mountains. Good steamboat service. Unsurpassed climate. Good land. Ten acres cleared. Young orchard of 650 fruit trees. Large modern poultry buildings. Small, but substantial house of five rooms, etc., new barn 50x60 with shed extension, smaller buildings, etc. Delightful place to live. No finer investment property. Property recently appraised at \$15,000. There is \$4,000 borrowed on it. Property will soon be ready to cut up into waterfront lots. What have you to offer?

Address: Washington, c. o. North Dakota Farmer, Lisbon, North Dakota.

MISCELLANEOUS

WANTED. Live Foxes, Skunks, Mink and Badgers, any time.
Envilla Stock Farm, . . . Cogswell, N. D.

FOR SALE: Some fine Collie Puppies. Price \$8.00 F. O. B. the Great Northern or Northern Pacific. **R. F. Smith, Tower City, N. Dak.**

POTATOES go 300 bushel to acre **CORN** 60 bushels to acre in **HUBBARD COUNTY.** Rich clover and dairying lands, near beautiful lakes, good towns, schools, roads, at very low prices. Write today to **Miller Bros. Land Co., Park Rapids, Minn.**

SEVERAL OF YOUR NEIGHBORS will buy an automobile this season. We want to know who they are. Write us today and ask how you can make \$10. It is easy. You should make more, too, using but a few minutes of your time. Address: **RENWICK Fisher Auto Co., 1303 Nicolet Ave., Minneapolis.**

WANTED to hear from owner of good farm for sale. Send cash price and description.
D. F. BUSH, Minneapolis, Minn.

BINDER TWINE. 7½ cash, also note terms. Request delivered carlot quotations, **Pinney E. Cooper, Sales manager, 307 Flour Exchange, Minneapolis, Minn.**

FOR SALE: 3 H. P. Ferro 2-Cycle Stationary Engine. Has been completely overhauled, after being used for light work and replaced by electric Motor. Just the power for driving machinery for lighting, grinding, separating, washing, pumping, etc. Complete with Coil, Battery, Pump, Pulley, Carburetor, Gasoline Tank, Exhaust Pipe, Foundation, etc., ready to run. Cost new \$80.00; if taken at once \$30. **Crocker Bros., Lisbon, North Dakota.**

Snap for Renter. Three hundred-acre farm, \$2500. Eighty acres under cultivation; one hundred fifty tillable, balance pasture. Will sell stock, implements and crop at reasonable price. Plenty of coal and water on place. Plenty of wood and free range near-by. Good location for stock ranch. **Adam Balakavage, Wibaux, Mont.**

FOR SALE. Medium Red Clover and Primost Flax.

J. M. Crawford, R. 3, Wahpeton, N. D.

Agents Wanted to sell our beautiful Art Pictures. They sell everywhere, in farm or city homes, at 25 cents up. Big profits. Beautiful sample, (size 16x20) and agent's terms, only 15 cents, post paid. Order at once and be the first in your territory. **The Art Shop, Dept. A, Hendrum, Minn.**

Auctioneering

COL. H. A. KINNEY

Real Estate and Registered Stock Specialist—22 years experience. Write for dates and terms Breeder and shipper of Chester White hogs. Larger blood lines for 1915.
Milnor, . . . NORTH DAKOTA

DAD'S ELECTRIC LANTERN
TRADE MARK
300 FT. of POWERFUL ILLUMINATING BRILLIANCE
IT'S A DANDY HANDY LANTERN—ASK TO SEE IT—FIRELESS—EVER-READY—PRACTICAL FOR ALL LANTERN USES
LIGHTS WITH ANY 6-INCH SIZE STANDARD DRY CELL BATTERY
AT ALL DEALERS EVERYWHERE—TRY IT—BUY IT
HYTEES FACTORIES, 5062 LITE ST. INDIANAPOLIS, U.S.A.



PRICE \$2 DELIVERED



Poultry Department



MISCELLANEOUS SUBJECTS

Michael K. Boyer

Points of a Good Fowl

Considerable has been written about egg type, meat type, and the general type of a good, practical fowl. Actual experience in the poultry yard has exploded all such ideas. It is desirable that a hen should excel as an egg producer, but it is equally important that she should be good at incubating and brooding. It is not uncommon to have hens that are excellent in laying, but indifferent as mothers. Important qualifications in a hen are that she be a good feeder, bright, clear-eyed, quick in action, and not scary. Years ago, the type most sought after was a large, well-feathered and deep body, short legs, small head, and broad shoulders. For the cock it was preferred that he be thicker in leg, broader across the shoulders, and fully a third heavier. It was all the better if he had a gallant strut, the first to get off the roost in the morning, and the first to go to roost at night, generous to his family, and not quarrelsome. Some poultrymen of that day associated large eyes with great hardiness.

Oyster Shell for Furnishing Lime

Some years ago a then well-known writer condemned the use of oyster shell as a food for furnishing lime so necessary in the construction of the egg shell. His contention was that the oyster shell did not contribute lime sufficient for that purpose. The New York Agricultural Experiment Station, however, vetoed that by proving that a pound of oyster shell contains sufficient lime to manufacture about seven dozens of eggs. The proper way to feed oyster shell is to have a small box of it within reach so the fowls may help themselves at will. Mixing it in the morning mash is risky, as there is a likelihood that the hens will consume more than required, and in consequence the shells of the eggs would become too hard. The hens know best when their system demands more lime. It is a very rare case when a hen gets too much if it is constantly within reach.

POULTRY NOTES

I have in mind a farm that buys, each year, a lot of pullets that are on the verge of laying. These are then

forced for heavy egg production. At the end of their first laying period they are dressed and shipped to market, and a new lot of pullets installed in their place.

There may be a profit in that method, but I do not approve of it, believing that better and more satisfactory business can be done by holding the birds two years, using them as breeders after they become yearlings.

It is not a wise step to stimulate layers. It is not the right road to travel in building up a hardy strain of profitable birds. Pure grains, green food, and the proper proportion of meat, is a diet that will build up the tissues and furnish material for manufacturing eggs.

While I believe in good egg records, I do not advocate phenomenal layers—at least not to breed from. Such work, sooner or later, weakens the stamina of what might otherwise be a hardy race. There is no profit in delicate stock. Some years back we had that class when the fanciers were wild to follow a Standard that was made up of considerable poor judgment. But today the fanciers' fowl have not only become more hardy, but they have proved themselves better layers and better table birds.

Start the strain first for its utility qualities, and then gradually branch out in meeting the requirements of the Standard. That will make better poultry; and that is the true American idea.

The demand for poultry and eggs is annually on the increase. It will take years before it can be fully met. The industry has grown to such gigantic proportions that all crops and industries are passed by the American hen. How can we keep this up, and how can we best meet that demand? By breeding more for winter eggs than for phenomenal year-round records; by breeding more for good, strong health; by breeding more for full-meat, attractive-looking carcasses—that's business poultry.

Diarrhoea in chicks is often caused by sour food, bad water, damp quarters, filthy coops, exposure to cold or wet, and too much green food. In fowls, too, it is caused by too much green food, lack of sharp grit, and errors in feeding.

BEITH'S WHITE WYANDOTES

Winners at Crookston, St. Paul, Minneapolis and Fargo, N. D. Our birds are bred to lay as well as they are bred to win.

J. C. BEITH

Wheatland, - North Dakota

EGGS FOR HATCHING from choice Silver Laced Wyandottes. \$1.50 for 15 eggs. Mrs. Thomas Brady, Lansford, N. D.

WHITE HOLLAND TURKEYS & BARRED PLYMOUTH ROCKS

Eggs for hatching from choice matings. Turkey eggs \$3.50 for nine eggs. Rock eggs, pen No. 1, \$2.50 for fifteen eggs. Pen No. 2, \$1.50. Express or parcel post prepaid. Not guaranteed by parcel post.

ROY W. JACOBS, - - WADENA, MINN.

BOURBON RED PURE BRED TURKEY TOMS, good ones, \$3.50 each. Toulouse Geese, \$4.00 per pair. Mrs. F. Spriggs, Maddock, N. D.

Breed White Wyandottes. Eggs for sale from vigorous trap-nested stock. My birds win in show room wherever exhibited. M. C. James, Valley City, N. D.

For Sale. Nice Buff Orpington Cockerels at \$1 each. Mrs. John Alexander, Edmunds, N. D.

White Holland Turkeys, Toulouse Geese and Barred Rock Cockerels.

Gustav Larson : : Northwood, N. D.

S. & R. C. White Leghorns. Blue Ribbon and Silver Cup Winners. Cockerels, \$1.50; Eggs, \$1 per 15; \$4 per 100. H. H. Hirschy, Lisbon, N. D.

S. C. R. I. Reds. High scoring cockerels. Eggs for hatching in season. Henry Mertens, Crary, N. D.

White Holland Turkeys, R. C. R. I. Reds. Stock and Eggs in season. Maurice H. Bliss, Geneseo, N. D.

EGGS FOR HATCHING, satisfaction guaranteed, Thoroughbred wide open laced, big utility, winter laying Silver Laced Wyandottes, bred for business and Indian Runner Ducks. 15 eggs \$1.50; 30 \$2.75; 50 \$4.00.

Anthony Elm, : : Lansford, N. D.

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Light Brahmas, and S. C. White Leghorns Over 30 years a breeder. Stock and eggs for sale. MICHAEL K. BOYER, Box 27, Hamonton, New Jersey.

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School and Home

HOME CARE OF MILK

Milk Sours Very Slowly at Low Temperatures—Clean Receptacles Aid in Keeping Milk Sweet—Whipping Cream.

With the advent of warm weather the care of milk in the home becomes more complex than during the late autumn and winter. Heat to the extent accumulated by allowing milk to stand on a warm porch or in the sun is enough to start the bacteria in milk to multiplying at a rapid rate and thus make it unfit for use as sweet milk, according to the dairy specialists of the department. The hot days also bring the flies, the great germ carriers, and the clouds of dust laden with bacteria, which, when coming to rest on milk receptacles, may easily contaminate the milk.

Milk is regarded as a natural culture medium for bacteria, and the rapidity with which the various forms will multiply under the proper temperatures is astonishing. It has been shown that if a cubic centimeter (about one-half teaspoonful) of milk containing 10 bacteria is kept at 68 degrees temperature for 24 hours the bacteria will have multiplied into about 61,000. In the same milk, if held at 50 degrees, the growth of bacteria would be very small, possibly as low as 40 in 24 hours. Milk which contains a large number of bacteria is either not fresh or has come from a diseased cow or has otherwise been contaminated.

Flies are possibly the most dangerous bacteria carriers which are likely to come in contact with milk. These scavengers may convey the germs of typhoid fever or other contagious diseases from the sick room or excreta to the milk. Typhoid epidemics have been caused by flies spreading the germs. Milk should be guarded from flies as rigorously as you would avoid exposure to disease.

Cows are now out on pasture, and milk is more easily produced under sanitary conditions than during the winter months when the cows are stabled continuously. Milk may be handled by the most correct and sanitary methods known, and yet if it is not cooled immediately after milking and kept cool until consumed, it very soon begins to change and grow sour. In fact, the bacterial content increases rapidly as long as the

milk remains above 50 degrees Fahrenheit. The bacteria are dormant or increase slowly at a lower temperature. For this reason, every precaution for keeping milk cold from the time it is produced until it reaches the consumer is essential, and especially so during the warm weather.

Milk may absorb impurities whenever it is exposed to the air or placed in unclean vessels. The amount or degree of contamination depends on the cleanliness of the air and of the utensil. Even the air of a so-called clean room contains some impurities. If the producer and dealer have done their duty, there is left at the consumer's door a bottle of clean, cold, unadulterated milk. But the consumer also has responsibilities in handling milk so that it continues to be fit for consumption, especially as food for babies. The milk in the home may be placed in unclean vessels, or exposed unnecessarily to the air, or not kept cool until the time of using. Thus things may happen to the milk affecting its quality, many of which occur thru carelessness.

Receiving Milk at the Home

The expression, "a bottle of clean, cold, unadulterated, milk" describes the kind of milk which should be delivered to the home. The method of dipping milk from large cans and pouring it into the customer's receptacle in the street, with all the incident exposure to the air, not always the cleanest, is a bad practice. Drawing milk from the faucet of a retailer's can is almost as bad as dipping milk, altho the milk is not exposed to the air as long as by the dipping process. Besides the insanitary part of this method, some consumers, unless the milk is kept well agitated, are likely to receive less than their proportion of cream. The custom of setting out at night an uncovered vessel which collects thousands of bacteria from the street dust before the milk is put into it is obviously very insanitary, and yet it is practiced to a large extent. If milk is to be received in a bowl or pail by the consumer, it is worth while to have it delivered personally to some member of the family, or, if the receptacle is to be placed in waiting for the milk deliverer, it should be covered with a plate, or better still, a glass preserving jar may be used in which nothing but milk is put. The jars with the glass tops are preferable; no rubber bands should be used.

Direct sunlight on the bottle of milk warms it rapidly and increases the bacterial content. Milk which is delivered very early in the morning, say, at 4 a. m., and remains out of doors until 9 or 10 o'clock, is very likely to become warm and less fit for human consumption than if it were taken in the house and placed in the refrigerator early in the morning.

Milk should not be transferred from the original bottle into another receptacle until just before consumption. The bottle should be kept covered with a paper cap or an inverted tumbler as long as the milk is in it. Milk deteriorates by exposure to the air in the pantry, kitchen, or nursery. Housewives are familiar with the ability milk has to absorb smells from strong foods like fish, cabbage, or onions. It is obvious, therefore, that such foods should be kept out of the refrigerator which contains milk.

If the milk is usually received in a bowl or pail, instead of a bottle, the same rules apply to the keeping of the milk as those mentioned above for bottled milk. Milk from the grocery store or bakery which is kept in a can, open most of the time, and possibly without refrigeration, is to be strictly avoided.

Care of the Refrigerator

The refrigerator, unless kept scrupulously clean, often is in itself a source of the bad flavor in milk. The refrigerator should be inspected at short intervals, at which times the outlet for the melted ice should be freed, the ice rack cleaned, and the place where the food is kept scalded with a sal-soda solution. Even tho the refrigerator is cold, a few drops of spilled milk, or a small particle of food neglected, will soon contaminate it.

Care of Milk Bottles and Utensils

Milk bottles are made for milk and not to hold sundry other foods. As soon as the milk bottle is empty it should be rinsed with lukewarm water until it is clean and then set bottom side up to drain. Bottles should never be returned in a dirty or filthy condition. All utensils with which milk comes in contact should be rinsed, washed, and scalded every time they are used. When cleaning these utensils, do not wash them in dishwater or wipe with ordinary dish towels. First rinse them and then boil in clear

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water and set away unwiped. If the receptacles are hot, they will soon become dry without wiping.

When a baby is bottle fed, every time the feeding bottle and nipple are used they should be rinsed in lukewarm water, washed in hot water to which a small amount of washing soda has been added, and then scalded. Never use a rubber tube between the bottle and nipple.

PICNIC SUGGESTIONS

"The enjoyment of a picnic is apt to lie in the simplicity of the arrangement." Its object is recreation and this should govern the preparation. Delicate or complex cookery is "out of place." One should keep in mind that the picnic lunch takes the place of the regular meals, therefore simple, substantial food which packs easily and carries well should be chosen. Following are food stuffs that are suitable for a picnic lunch:

Meats—Meat loaf with hard cooked egg center; cold sliced meat; "Wienies"; fried chicken; cold sliced ham; sardines.

Sandwiches—Plain; Boston brown bread; chopped ham and salad dressing; cheese and pimento; nut bread sandwiches; date; peanut.

Salads—Salmon; potato; cottage cheese; cold slaw; deviled eggs.

Relishes—Radishes; celery; olives; pickles; potato chips.

Fruits—All fresh fruits.

Sweets—Cookies, cakes, candy nuts.

Beverages—Coffee, iced tea, lemonade.

Use paper plates, cups, etc., so as to reduce the amount of things to be carried home. Have all food well prepared, daintily packed, plenty of it and not too great a variety.—Miriam Haynes, Colorado Agricultural College, Fort Collins, Colo.

FROM THE SHOULDERS UP

What Milady Wears Upon Her Head and around Her Neck Defies Time and Place, to Suit Her Fancy

Summer Furs at 90° Fahrenheit

New York, July 12th
Transparent hats and furs, velvet head-gear and low necks—these are some of the things in the summer fashions that men question, and even a few women come up to and shy at, as the thermometer soars skyward. The little maiden with her "rikisha" hat goes serenely on; the girl with the white fox furs hugs them more closely,

and the wearer of the velvet hat sedately raises a parasol. Such matters are beyond the comprehension of mere man or the woman who has brought up to view clothes for comfort.



© MCCALL

A Sports Hat of Blue Taffeta, the Woven "Rikisha" and Silk Sailor the "Chin-chin," the Jabot and the Puritan Collar.

Their very oddity is the lure that makes them popular. What matters a coat of tan if the hat is woven with holes to duplicate the head-dress of the man that pulls the jinrikisha in Japan?

Even the woman who is conservative with her dress and suit, casts wisdom to the winds above the shoulder-line. What lies above bespeaks the true woman who, in her heart of hearts, loves the fantasies of fashion. The demur Quaker and saucy "Chin-Chin" collars, the flappy hat and stiff-brimmed sailor, even the plug hat of silk beaver fringe that Mrs. Vernon Castle made famous at the races, appeal to those of us who like something "different."

The mode breathes romance, and romance is what fashion thrives on.

Every hat and every collar awakens a memory or tells a new tale. It is interesting to note that the Quaker collar has its origin in the collar of the man's costume. How scandalized the shades of the old-time Quaker and Puritan must be to see their collars made in frivolous organdy, Swiss and cretonne! Jabots and frills come from another period, when French courtiers wore fur-belowes. In modern times, Sara Bernhardt gives her famous youth-giving frill to the high collar; while the flaring half collars that are still shown on dresses and waists harp back to a portrait or Shelley. Nor is the mode without humor; "Chin-Chin" collars, aimed at a giddy masquerade costume, have gone far of the mark and appear on coats.



© MCCALL

A Garden Hat of White Chip, the Military Turban and Sports Hat of Bias Silk Strips, with the Flaring, the Standing and the Quaker Collar.

Past modes are drawn on for hats, too. In an exclusive shop, just off the Avenue, one of the girls of the younger set ordered a garden hat the other day of white chip, with a pyramid of

pink roses—the exact duplicate of the hat her great-great-grandmother wore when she tripped across the lawns at the Capital. All these garden hats of leghorn and Milan recall Colonial days. Even the “rikisha,” imported in spirit from Japan, smacks of this style when trimmed with roses, the black varnished cord of which it is made contrasting with the light frocks.

Broadly speaking, the hats of the season are divided into four classes; these portrait-fashion garden hats, stiff-brimmed sailors that bespeak the past or the present, according to the materials and trimmings; the sports hats, borrowed from the four corners of the globe, and last, but not least, the cocky turbans, which show the martial note in millinery.

The stiff-brimmed sailors are a chapter in themselves. Already, the straws are on the wane. Chiffon brims we have tired of, and so the attention naturally turns to sailors of blue taffeta, black velvet and cretonne. “America,” the white, leather-faced, blue taffeta, is a worthy emblem to the country from which it takes its name. White beaded wings for trimming bring to mind the speed of Mercury; and the glory of ancient Rome lies in other bead trimming for other taffeta hats.

Black velvets, shiny and plushy as cat’s fur, are embroidered with fleecy white wool, as wintry as possible to shock the sun of summer. Birds and animals in the wool crawl over the crowns, and the brims are invariably finished in old-fashioned quilt-stitch, varied in length to make a design.

With white linen and cretonne costumes, “Mistress Mary” cretonne hats make a smart finish. These need no trimming, the bright colors being gay enough for any summer landscape, whether mountains, country or shore.

Sports hats come from odd nooks and corners. The latest, a dark blue taffeta, is decidedly Chinese in aspect. It has a sloping brim, with a soft edge an inch wide that flaps down and shades the face, dented on one side with heavy balls suspended from the ends of a cord tied around the crown. Scotland contributed the tam, and there is a soft hat made completely of narrow bias strips of silk that is finding favor under a “Made-in-America” label.

Those of the turbans that are smart are military; tipped fearlessly to one side, with sides of velvet and crowns of silk. Indeed, so simple and so smart are these hats, they baffle description.

At the present time, hats come under these four classes, black and white prevailing, dark blue being the exception that proves the rule. Later, when

suits grow darker, no doubt, hats will gain in brilliance. Already in Paris there is a trend in this direction. From the “City of Modes” we receive such messages as: “Occasionally, a very brilliant spot of color will be noticed in the hat, currant-colored hats or hats of the new blue de l’etoile being worn with the tailored suits of beige, white, dark navy blue or brown”; that “The Italian military ‘bersiglieri’ is being worn with its flowing cocks’ plumes at the side”; and again, “The suits of tan are usually trimmed with wide shaw collars of white wool or faille silk, and are topped by tiny white hats or by broad brimmed sailors made of soft white crepe de Chine.”

TO SELL MILK OR CREAM

The question sometimes arises as to the best way to dispose of milk, say selling it at 5 cents a quart or receiving 30 cents a pound for butterfat. One hundred pounds of 4% milk will contain 4 pounds of butterfat and at 30 cents this will bring \$1.20. The skim milk should be worth 25 cents, bringing the total to \$1.45. One hundred pounds of milk will make forty-six and one-half quarts which at 5 cents will bring \$2.32. However, when sold by the quart the milk must be delivered perfectly sweet and the bulk that needs to be delivered will be 7 or 8 times as much as when sold as cream. If near town it may pay to sell the milk, but if at a distance from market the extra cost of handling the milk may more than over-balance the difference in price. However this is a problem for each one to work out for himself on the basis of the figures given above.

THE STORY OF THE STARS AND STRIPES

In September 1775 there was displayed in the South what is by many believed to be the first distinctively American flag. It was blue with a white crescent, and matched the dress of the troops, who wore caps inscribed “Liberty or death.”

The colonists desired to adopt a common flag; but they had not yet declared independence and were not at first seeking independence. They took the British flag as they knew it, and made a new colonial flag by dividing the red field with white stripes into thirteen alternate red and white stripes. This is known as the Cambridge flag, because it was first unfurled over Washington’s headquarters at Cambridge, Mass., on January 1, 1776. It complied with the law of

1707 by having the Union Jack on it; it also represented the thirteen colonies by the thirteen stripes.

As the colonists gradually became converted to the idea that independence from the mother country was necessary, they began to modify the flag, first by leaving off the Union Jack and using only the thirteen horizontal stripes. The modified flags were not always red and white, but regularly consisted of combinations of two colors selected from red, white, blue, and yellow. The final modification was the replacement of the Union Jack by the white stars on a blue field.

The stars are the only distinctive feature of the American flag. The charming story which credits Betsy Ross with making the first flag of stars and stripes is still accepted by historians. When Washington suggested the six-pointed star, she demonstrated the ease with which a five-pointed star could be made by folding a piece of paper and producing one with a single clip of the scissors. Some writers are of the opinion that both stars and stripes in the flag were derived from the coat of arms of the Washington family, but this theory is not generally held.

The official adoption of our first flag was in 1777. On June 14 of that year the Continental Congress passed an act providing that “the flag of the thirteen United States be thirteen stripes, alternate red and white; that the union be thirteen stars, white on a blue field, representing a new constellation.” The thirteen stars were arranged in a circle to symbolize the perpetuity of the union of the States.

Vermont was admitted to the Union in 1791 and Kentucky in 1792. It was felt that these two new States ought to be recognized on the flag, so in 1794 Congress passed an act making the flag fifteen stars and fifteen stripes.

This remained the flag of the United States thruout the War of 1812, until there were twenty states in the Union. In 1816, an effort was again made to modify the flag so that all the new states would be represented on it. To be continually adding stripes would make the flag very awkward in shape and appearance, so after arguing the matter for two years, Congress decided to return to the original thirteen stripes and one star for each state. Congress has never determined the arrangement of the stars nor the shape and proportions of the flag, and there has been great variation, especially in the grouping of the stars. There are still many who believe that the symbolic circular grouping of the stars should be restored.

Household Hints

By Aunt Maggie

An Elusive Meat Flavoring

In a quart bottle of the best vinegar place a small garlic and as the vinegar is used replenish it. Into the pores of the meat pour as much vinegar as it will absorb, then brush over on both sides with olive-oil. This makes the meat rich and tender; the vinegar can not be detected, and the garlic gives a mysterious flavor that can not be defined.

To Renew Old Varnished Furniture

To make old furniture look like new make two quarts of thick starch and add to the starch four tablespoonfuls of lye and mix thoroly. Using a paint-brush, paint the piece of furniture with this mixture. After a few minutes wash off thoroly with the hose (if outdoors), a brush if one must be inside. The starch will take off all the finish on the furniture down to the natural wood. After drying well apply a coat of wood filler and then varnish, and the piece of furniture will look like new. The amount of work is small and the result gratifying.

A Whipped Cream Secret

Before whipping cream add the white of a fresh egg. It takes less

time and thinner cream to make lovely whipped cream.

When injury to a finger demands the use of a cot or finger stall, it is often inconvenient to tie the strings which go around the wrist. I use a rubber band one-eighth of an inch wide, fastening it to the cot thru a small slit in the end. While the rubber, if of the proper length, will hold the cot on securely, it takes only a moment to slip it on over the hand when putting on the cot.

Tea and coffee stains may be taken from a tablecloth by soaking the spots with glycerine and letting stand for several hours untouched. Afterward wash with soap and water.

If lead pencil writings or drawings are held over the steam of a briskly boiling kettle, the lead will be firmly and permanently set for preservation.

A little child drank a large quantity of camphor. An old lady who was visiting at the house told the mother to give her cream. The doctor soon arrived, but said it was the cream that saved her, that he would have been too late.

Our little girl accidentally overturned a pot-full of hot coffee over herself. It scalded her back and entire right limb very badly. Being four miles from either doctor or drug store, we had to think quickly of some available remedy. We bathed the burns in kerosene and rubbed on flour as long as it would adhere, repeating the process every twenty or thirty minutes. By noon there were no burns visible and our family physician said that presence of mind had saved our baby girl from a long sickness.

After frying croquettes in deep fat (which is much better than sauteing in a frying pan) turn the fat into a bowl of hot water, stir well, and the next day a pure cake of fat can be removed from the top.

The heels of my rubbers always wore out, while the rest was but little worn. Now I place a little crumpled paper in the heels, and find the rubbers last much longer, and keep in proper shape.

After turning the hems on new napkins or tablecloths, I take a gentleman's lather brush or any soft brush and go over the edge to be hemmed

with soapy water. This will dry in a very short time, and they can be hemmed as easily as old linen.

If there are any pencil marks on the linen, erase them carefully with a rubber eraser before the linen goes into the wash. Hot water will set them beyond hope of removal.

Unsightly cracks in a kitchen floor were filled in, nicely, with a composition made as follows: Bring to a boil three quarts of water, to which has been added one pound of flour and one tablespoon of alum. Stir in large pieces of newspaper until the mixture is thick like putty, and fill the cracks with the warm compound. This is really a homemade papier mache and hardens equally well.

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Seasonable Receipts

Edited by Mrs. Sadie Baird.

SIMPLE FROZEN DAINTIES

Ices and sherbets are always very appetizing and refreshing at this season. Many farmers now store ice for summer use and a good freezer is not to be considered an extravagance. However, many frozen desserts may be made by simply packing the receptacles in the ice and salt.

Coffee Bavarian Cream

One-half pint milk, yolks of 2 eggs beaten, and one-half cup sugar cooked like custard. While hot add one-half box gelatine dissolved in one-half cup strong coffee. Add one-half pint whipped cream. Turn into one large mold or small ones and pack in salt and ice.

Milk Sherbet

Squeeze juice of four oranges and two lemons on four cups sugar. Scald lemon skins in one pint boiling water. Scald two quarts of milk with two tablespoons cornstarch and one cup sugar. When cold put in freezer and when it begins to stiffen add fruit juice and sugar and freeze. Delicious.

Whipped Cream Frozen in Colors

Whip one pint rich, flavored, sweetened cream, and divide in two portions. Color one pink with fruit

color, or brown with chocolate. Take two clean pound baking powder cans and put a partition of stiff paper down the centre. Fill with the two colors of cream, one on each side. Slip the paper partition out after putting a knife down on each side of it so it will come out without blurring the cream. Fit covers on tight. Pack in a bucket with salt and ice for five or six hours. Wrap the cans for an instant in hot cloths and the moulded cream will turn out perfect. Slice it crosswise.

Knickerbocker Pudding

One-half cup orange juice, one-fourth cup lemon juice, sweetened to taste. Turn into a mold. Whip one pint heavy cream, add half cup powdered sugar, half teaspoon vanilla, two-thirds cup chopped walnut meats. Pour over the fruit mixture, cover, pack in salt and ice and let stand three hours. Two distinct, delicious flavors will be noticed.

Notice that no freezer is needed for the two above recipes but it will have to be used for the following ices:

Orange Ice

Three cups water, two cups sugar, boil one minute. Add two cups orange juice, one-fourth cup lemon juice, and grated rind of two oranges. Cool, strain, and freeze.

Strawberry Ice

One cup sugar sprinkled over one quart berries. Let stand two hours. Mash and squeeze thru two thicknesses of cheese cloth. Add cup cold water and lemon juice to taste and freeze.

ICE CREAM

One quart milk, three-fourths cup sugar, one level tablespoon flour, two eggs. Heat milk to boiling point; mix flour and sugar dry and sift slowly into boiling milk. Cook five minutes, then add the well beaten eggs and remove from the fire at once. When cool add one pint of good cream; flavor to taste and freeze.

Peach Ice Cream

Add four peaches mashed with a silver fork and sweetened slightly to above recipe.

Banana Ice Cream

Add three bananas mashed with a silver fork and sweetened slightly to above recipe.

Chocolate Ice Cream

Add one and one-half square chocolate (melted) to above recipe and add a little more sugar.

MILK SHERBET

Juice of two lemons and two oranges, one quart new milk, one pint sugar. Chill milk; then add fruit juice and freeze.

Rhubarb and Currant Jam

Use half as much black currants as rhubarb, and allow one pound of sugar to every pound of fruit; boil slowly together until done.

CURRANT JELLY

Currants for jelly should not be over-ripe. Take ripe currants, set in a stone jar and put in a vessel of hot water over the fire. Keep water boiling all around until the currants are broken, stirring occasionally. Squeeze thru jelly bag, measure bowl juice to bowl heated sugar. Boil 5 minutes. Pour into glasses. Many use one cup of water and two cups of the juice to three cups of sugar, claiming this makes even a better jelly.

SPICED CURRANTS

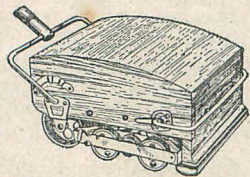
Seven pounds fruit, four pounds sugar, one pint good cider vinegar, one tablespoonful ground cinnamon, one teaspoonful cloves. Put in kettle and boil until fruit is soft. Skim out fruit and put in dish while the syrup boils down thick. Turn fruit into syrup, heat this thru, seal in glass jars. Any tart fruit may be put up thus. Nice with cold meats.

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